DEPARTMENT OF HEALTH SERVICES (DHS)

FY 2022 Highlights

- The Groundwater Program assisted the Department of Natural Resource (DNR) in FY2022 in a project to sample public water systems across the state for per and polyfluoroalkyl substances (PFAS). DHS worked with DNR's Drinking Water and Groundwater Program to develop public notice language for public water systems with high levels of PFAS. The DHS Groundwater Program also provided advisory letters to residents with concerns about their water quality on various hazards.
- Multiple DHS programs, including the Groundwater Program and the Site Evaluation Program, provided technical assistance and health education related to more than a dozen groundwater contamination sites in Wisconsin. In FY2022, these programs addressed PFAS contaminants at several locations within the state (e.g., Marinette, La Crosse, Eau Claire, Wausau, Peshtigo, French Island, Madison, Rhinelander). The Site Evaluation Program also assessed groundwater contamination at other sites for polycyclic aromatic hydrocarbons; benzene, toluene, ethylbenzene, and xylene (BTEX) compounds; and chlorinated volatile organic compounds (VOCs) such as TCE, PCE, and 1,2-DCA.
- Wisconsin's Environmental Public Health Tracking Program released a request for applications in FY2022 for local and tribal health departments (LTHDs). Funds are used by grantees to explore data from the County Environmental Health Profiles and the tracking data portal to identify an environmental health concern in their jurisdiction. Six LTHDs were funded and one of those projects focused on water quality, specifically testing of manganese in private well water. In addition, Wisconsin Tracking will be working with the DNR and two LTHDs to streamline data flow of private well water results to the DNR.
- The Climate and Health Program (CHP) and Wisconsin Sea Grant piloted the Flood Resilience Scorecard (FRS) during the pandemic in summer 2020 to evaluate the City of Washburn's flood vulnerabilities. FRS is a comprehensive tool designed to help communities identify what makes them most vulnerable to flooding and what actions they can take to increase their resilience. FRS has been published online and will be available in an interactive format in late summer 2022. CHP will continue to evaluate flood vulnerability using FRS in an estimated 30–40 communities in 2022 to improve local flood resilience and health equity in Wisconsin communities. CHP also continued to promote its Risk Assessment Flood Tool (RAFT), an interactive flood planning and response map, to LTHDs and flood and emergency management professionals. DHS flood planning and response tools can help identify flood-prone areas of the state and identify populations at greatest risk to drinking water contamination resulting from flooded wells.

Overview

DHS serves as a primary resource for information about the health risks posed by drinking water contaminants and is charged with investigating suspected cases of waterborne

illness. Toxicologists, public health educators, epidemiologists, and environmental health specialists employed in the DHS Division of Public Health work together to:

- Develop recommendations for groundwater standards for the protection of public health upon request by the DNR.
- Present information on water quality and human health implications of groundwater and drinking water contamination to the public through town meetings and conferences, as well as a wide variety of informational materials.
- Provide direct assistance to families via home visits, letters to well owners, and telephone consultations.
- Educate residents who have contaminated water supplies on the health effects of specific contaminants and recommend strategies for reducing exposure until a safe water supply can be established.
- Provide advice and assistance in cases of vapor intrusion when shallow groundwater is contaminated with volatile organic chemicals, such as benzene and vinyl chloride, which are released as vapors from groundwater directly into buildings through foundations.
- Improve understanding of current and potential groundwater and drinking water issues related to human health in Wisconsin through disease surveillance, health assessment, and capacity and vulnerability assessment. Information from these activities assists project development, focuses area prioritization, and supports academic research. This information also aids local and state agency work on groundwater-related public health issues.

Detail

Reviewing Scientific Information to Develop Public Health Recommendations for Groundwater Contaminants

Wisconsin Stat. ch. 160 directs DHS to recommend health-based standards for substances found in groundwater and specifies the protocol for developing these recommendations. Recommended standards are sent to the DNR and are submitted through the rulemaking process as amendments to Wis. Admin. Code ch. NR 140.

In FY2022, DHS continued to support DNR's rulemaking efforts for the Cycle 10 groundwater standards by responding to public comments and presenting at the Natural Resources Board meeting. The DNR is currently working to determine next steps for these standards. To learn more about these recommendations, please visit DHS' Cycle 10 website.

Working with Partners to Address Drinking Water Concerns

The DHS Groundwater Program also continues to work with other DHS programs to support state, local, and community partners in response to groundwater contamination issues in collaboration with the Site Evaluation Program (see Environmental Cleanups section).

The Groundwater Program also interacts directly with members of the public to address issues affecting their drinking water and increase public awareness of groundwater and drinking water health issues. In FY2022, the Groundwater Program provided advisory letters to residents with concerns about their water quality on hazards including bacteria, manganese, and strontium and worked on several outreach materials related to evaluating risk from PFAS in drinking water. For instance, the Groundwater Program worked with a graphic designer to develop a short video describing how we evaluate risk from exposure to mixtures of PFAS. The program also worked with the University of Wisconsin-Madison's Sea Grant Institute to develop an online tool that the public can use to evaluate their risk from PFAS in their drinking water.

Environmental Cleanups

Multiple DHS programs including the Groundwater Program and the Site Evaluation Program provided technical assistance and health education related to several groundwater contamination sites in Wisconsin.

In FY2022, these programs again had a large focus on PFAS contamination in groundwater across the state. DHS toxicologists and health educators assessed the human health risks of PFAS exposure at many sites, including Marinette, La Crosse, Eau Claire, Madison, Rhinelander, and Wausau. Additionally, these programs assisted the DNR in a project to sample public water systems across the state for PFAS. As part of this project, DHS worked with DNR's Drinking Water and Groundwater program to develop public notice language for public water systems with high levels of PFAS and served as a liaison between DNR and LTHDs on these sites. The team routinely provided technical assistance to concerned citizens, impacted water systems, and contamination sites through the assessment of multiple interconnected exposure pathways, including groundwater, surface water, and biota (such as fish or deer consumption), providing appropriate recommendations to reduce or halt exposure to reduce PFAS levels in the body.

Beyond PFAS, the Site Evaluation Program has also worked to assess groundwater contamination at several other sites across the state. These assessments included evaluating exposure pathways; performing hazard assessments; and mitigating risk for PAHs, BTEX compounds, and chlorinated VOCs such as TCE, PCE, and 1,2-DCA through risk communication.

Taking Action with Data: Use of the Environmental Public Health Data to Improve Environmental Health in a Community

DHS continuously seeks to provide data and resources to LTHDs to assist them in making public health improvements in their communities. In FY2022, Wisconsin Tracking released a request for applications (RFA) for LTHDs, *Taking Action with Data*, for the sixth round of funding. Six LTHDs were funded through this mini-grant opportunity and one project focused on water quality. LTHDs often select private well water quality as a topic they wish to address within their jurisdictions, as this is a significant concern in Wisconsin. This year, Lincoln County's project aims to increase testing of manganese in private well water. To learn more about prior mini-grant LTHD success stories, please see our Environmental Public Health Tracking webpage.

Wisconsin Tracking and other DHS staff provide ongoing support, technical assistance, and guidance to LTHDs on epidemiology, communications, and evaluation throughout the

project period. LTHDs carry out their projects with support and assistance from the Tracking Program as needed. Some examples of technical assistance we provide to LTHDs include sharing summaries of past projects focused on water topics completed by grantees; reviewing and providing feedback on surveys and data visualization; and assisting in their writing of project success stories.

Wisconsin Tracking recently submitted a competitive application to the Centers for Disease Control and Prevention (CDC) to continue the work our program started in 2002. The CDC is currently focused on data modernization as an essential component in the improvement of public health. We intend to continue our *Taking Action with Data* mini-grants project and are adding a data modernization pilot to the project. We will be working with the DNR and with two LTHDs to streamline the data flow of private well water testing results from the laboratory to the DNR.

Climate and Extreme Weather Vulnerability Assessment

The DHS Climate and Health Program (CHP), funded by the CDC, works to enhance statewide capacity to prepare for and respond to the public health impacts of climate change, including impacts to private wells from heavy rainfall and flooding events.

Gaps identified previously by the Wisconsin Climate and Health Profile Report have led to the development of several flood-related resources and tools, with the goal of enhancing understanding of flood risks in watersheds and populations vulnerable to flooding events. Flooding events can have negative effects on groundwater quality and public health. These effects can include well contamination and impacts to aquifers due to chemical releases and flood runoff that contains nutrients and other chemical pollutants from both urban and agricultural sources. These projects involve partnerships within DHS and with the University of Wisconsin Center for Climatic Research, Wisconsin Sea Grant, the Association of State Flood Plain Managers, Wisconsin Emergency Management, and several LTHDs. The findings from these flood-related projects have helped inform LTHDs and local emergency management planning processes.

The CHP is currently working on two flood-related tools to help LTHDs, local emergency management, tribal emergency management, and municipal government officials and planners better understand flood vulnerability in Wisconsin:

- A Flood Resilience Scorecard has been published as a document online and will be available in an interactive format later this summer. The tool has been created to aid communities in flood vulnerability assessment. The scorecard identifies institutional, social, environmental, and infrastructure vulnerabilities that could hinder a municipality's ability to prepare for and respond to flood events. The scorecard will provide recommendations for improvements that will ultimately reduce the negative health impacts from flooding events.
- The Wisconsin Flood Toolkit has been recently revised to include specific considerations for priority populations, those who are particularly susceptible or vulnerable to flooding events. This update will help municipalities better tailor their response and messaging to those most in need during a flooding event. This tool has also been translated into Spanish.

- A third flood-related tool was launched in March 2019 and is undergoing continuous updates. The Risk Assessment Flood Tool (RAFT) provides an online customizable graphic interface for assessing a community's higher risk areas during flood events by overlaying critical infrastructure and vulnerability data with live river gage data from National Oceanic and Atmospheric Administration (NOAA). RAFT assists local emergency management, local emergency preparedness, tribal health centers, and Local Public Health Agencies plan and prepare for flooding events. It will also inform future outreach efforts targeted at private well owners in vulnerable areas.

Environmental Radiation Monitoring

Wisconsin Stat. ch. 254 directs the DHS Environmental Monitoring (EM) Program to collect various types of samples for environmental radiation monitoring, including surface and well water from selected locations at planned sampling intervals near nuclear power plants. The EM Program provides an ongoing baseline of radioactivity measurements to assess any Wisconsin health concerns from the operation of nuclear power generating facilities in or near Wisconsin, or other radiological incidents that may occur within Wisconsin or worldwide.

DHS' ongoing EM Program will provide assurances to the citizens of Wisconsin that the environment surrounding nuclear power facilities and other monitoring areas will continue to be evaluated.

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